

Electronic supplementary information

Optimizing Photovoltaic Performance in CuInS₂ and CdS Quantum Dot-Sensitized Solar Cells by using an Agar-Based Gel Polymer Electrolyte

Ellen Raphael,^{1,2} Danilo H. Jara,² Marco A. Schiavon^{1}*

1 – Department of Natural Science, University of São João del-Rei – UFSJ, São João del-Rei, Minas Gerais 36301-160, Brazil

2 – Radiation Laboratory, Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, Indiana 46556, United States

* Marco A. Schiavon - schiavon@ufs.edu.br Department of Natural Science, University of São João del-Rei – UFSJ, São João del-Rei, Minas Gerais 36301-160, Brazil

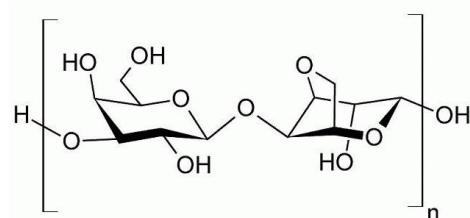


Figure S1. Structure of agarose

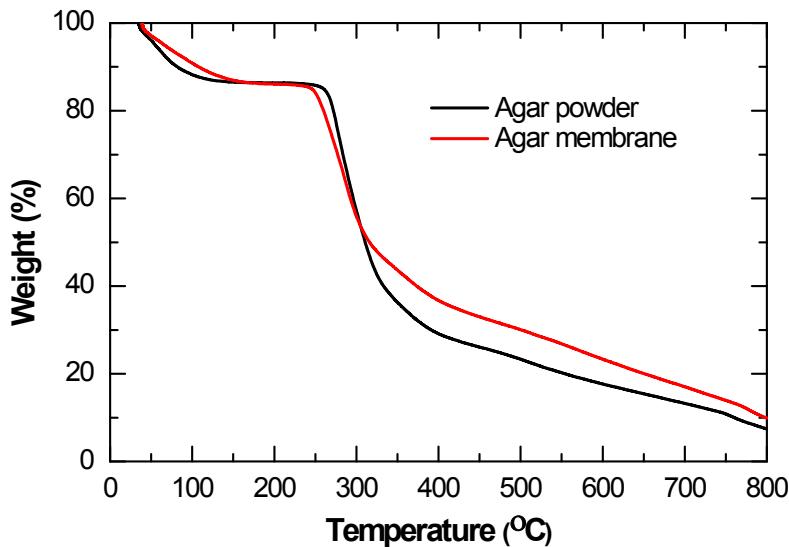


Figure S2. Thermogravimetric curves for agar pure (powder) and agar membrane.

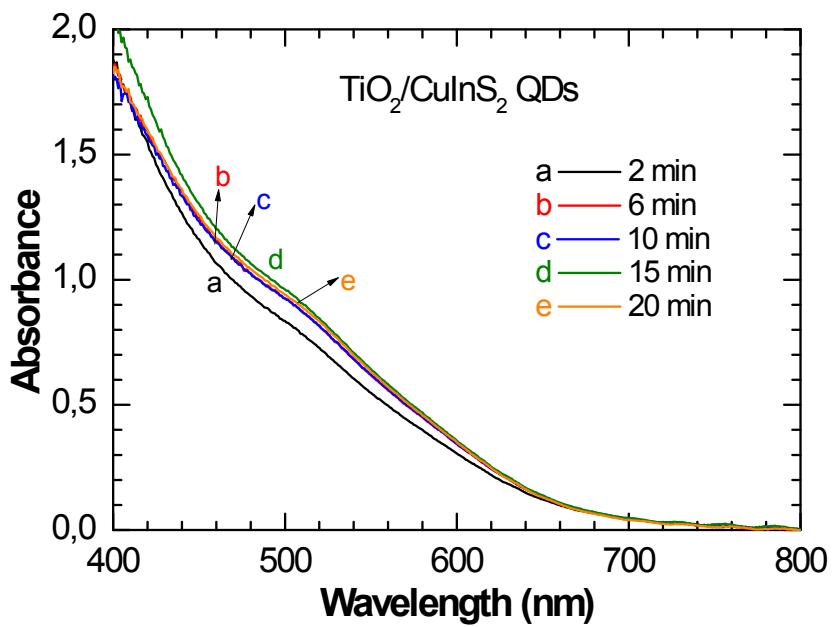


Figure S3. Absorption spectra of $\text{TiO}_2/\text{CuInS}_2$ composite to track the maximum adsorption of CuInS_2 deposited by EPD onto TiO_2 .

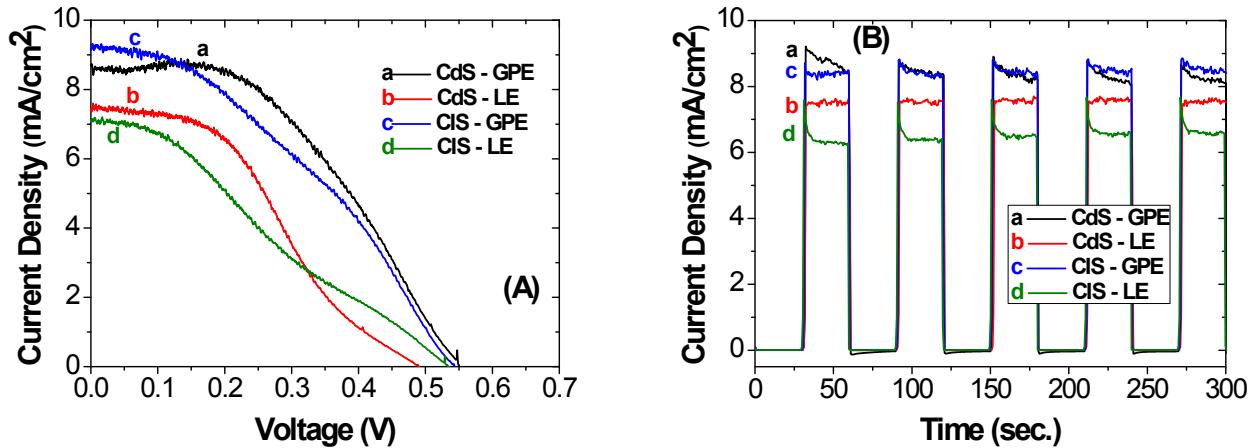


Figure S4. Current-voltage characteristic of CdS and CuInS₂ QDSCs (a) and photocurrent stability (b). The electrolyte and QDs used in both experiments are shown in the inset.